

WHAT IS CLAIMED IS:

1 1. A method for processing data packets comprising:
2 receiving multiple types of data packets,
3 sending a first predetermined type of data packet to a first data path and a second
4 predetermined type of data packet to a second data path, and
5 communicating in advance the types of data packets received to an arbitrator of a
6 shared resource of the data paths.

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8 2. The method of claim 1, further comprising:
9 selecting how to handle the data packets based on the communicated types of data
10 packets.

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12 3. The method of claim 1, further comprising:
13 selecting data packets for a shared resource of the data paths based on the
14 communicated types of data packets.

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16 4. The method of claim 1, further comprising:
17 selecting a shared resource to send a data packet based on the communicated types of
18 data packets.

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20 5. The method of claim 1 wherein sending further comprises sending a third
21 predetermined type of data packet to a third data path.

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23 6. The method of claim 1 wherein communicating further comprises communicating
24 the order that the data packets were received.

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26 7. The method of claim 1 wherein the first predetermined type of data packets are
27 non-IP multicast packets and the second predetermined type of data packets are IP multicast
28 packets.

30 8. A computer program product, disposed on a computer readable medium, for
31 processing data packets comprising instructions for causing a processor to:
32 receive multiple types of data packets,
33 send a first predetermined type of data packet to a first data path and a second
34 predetermined type of data packet to a second data path, and
35 communicate in advance the types of data packets received to an arbitrator of a shared
36 resource of the data paths.

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38 9. The program of claim 8 further comprises instruction for causing a processor to:
39 select how to handle the data packets based on the communicated types of data
40 packets.

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42 10. The program of claim 8 further comprises instruction for causing a processor to:
43 select data packets for a shared resource of the data paths based on the communicated
44 types of data packets.

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46 11. The program of claim 8 further comprises instruction for causing a processor to:
47 select a shared resource to send a data packet based on the communicated types of
48 data packets.

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50 12. The program of claim 8 further comprises instruction for causing a processor to:
51 send a third predetermined type of data packet to a third data path.

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53 13. The program of claim 8 further comprises instruction for causing a processor to:
54 communicate further comprises communicating the order that the data packets were
55 received.

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57 14. The program of claim 8 wherein the first predetermined type of data packets are
58 non-IP multicast packets and the second predetermined type of data packets are IP multicast
59 packets.

61 15. A system for processing a data packet, the system comprising:
62 at least one communication port;
63 at least one Ethernet MAC (Medium Access Control) device coupled to at
64 least one of the at least one communication ports;
65 at least one processor having access to at least one Ethernet MAC device; and
66 instructions for causing at least one processor to:
67 receive multiple types of data packets,
68 send a first predetermined type of data packet to a first data path and a
69 second predetermined type of data packet to a second data path, and
70 communicate in advance the types of data packets received to an
71 arbitrator of a shared resource of the data paths.

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73 16. The system of claim 15 further comprises instruction for causing at least one
74 processor to:

75 select how to handle the data packets based on the communicated types of data
76 packets.

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78 17. The system of claim 15 further comprises instruction for causing at least one
79 processor to:

80 select data packets for a shared resource of the data paths based on the communicated
81 types of data packets.

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83 18. The system of claim 15 further comprises instruction for causing at least one
84 processor to:

85 select a shared resource to send a data packet based on the communicated types of
86 data packets.

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88 19. The system of claim 15 further comprises instruction for causing at least one
89 processor to:

90 send a third predetermined type of data packet to a third data path.

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92 20. The system of claim 15 further comprises instruction for causing at least one
93 processor to:

94 communicate further comprises communicating the order that the data packets were
95 received.

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97 21. The system of claim 15 wherein the first predetermined type of data packets are
98 non-IP multicast packets and the second predetermined type of data packets are IP multicast
99 packets.

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101 22. A device for processing data packets comprising:
102 a module to receive multiple types of data packets,
103 a module to send a first predetermined type of data packet to a first data path and a
104 second predetermined type of data packet to a second data path, and
105 a module to communicate in advance the types of data packets received to an
106 arbitrator of a shared resource of the data paths.

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108 23. The device of claim 22 further comprises:
109 a module to select how to handle the data packets based on the communicated types
110 of data packets.

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112 24. The device of claim 22 further comprises:
113 a module to select data packets for a shared resource of the data paths based on the
114 communicated types of data packets.

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116 25. The device of claim 22 further comprises:
117 a module to select a shared resource to send a data packet based on the communicated
118 types of data packets.

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120 26. The device of claim 22 further comprises:
121 a module to send a third predetermined type of data packet to a third data path.

123 27. The device of claim 22 wherein the module to communicate further comprises:
124 communicating the order that the data packets were received.

125 28. The device of claim 22 wherein the first predetermined type of data packets are
 non-IP multicast packets and the second predetermined type of data packets are IP
 multicast packets.